

Product Support and Human Capital



Essential Ingredients for Optimizing System Readiness, Availability, and Life Cycle Costs

Bill Kobren

Traditionally, development and procurement have accounted for about 28 percent of a weapon's total ownership cost, while costs to operate, maintain, and dispose of the weapon system account for about 72 percent of the total. For a number of years, the department's goal has been to spend less on supporting systems and to devote more funds to development and procurement in order to modernize weapon systems. But, in fact, growth in operating and support costs has limited the department's buying power."

—Setting Requirements Differently Could Reduce Weapon Systems' Total Ownership Costs
General Accounting Office, February 2003

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The affordability and efficiency initiatives undertaken by the Department of Defense in 2010 are prudent and necessary steps to proactively address current fiscal realities faced by the federal government during a period of increased financial uncertainty. We must "do more, without more," as Under Secretary of Defense for Acquisition, Technology and Logistics Dr. Ashton B. Carter has said. Given the portion of weapon system life cycle costs allocated to supporting and sustaining those systems, it is reasonable that the department would focus its efforts not only on reducing the portion of life cycle costs devoted to product support, but also on implementing initiatives to aggressively shrink the size of the pie itself, while simultaneously working to ensure that warfighter system availability and readiness requirements are met.

Reducing weapon system life cycle costs—like achieving warfighter performance requirements—is an endeavor that continues throughout a system's life cycle. Early in the life cycle, it necessitates a focus on identifying realistic, integrated, and achievable product support requirements; and once a material solution has been identified to meet a capability need, to design for and develop an effective and efficient product support strategy that optimizes system readiness and availability, while minimizing logistics footprint and life cycle costs. This, in turn, necessitates that weapons systems be designed, maintained, and modified to continuously reduce the demand for logistics; but when required, that the logistics support must be effective and efficient. In short, the resources required to provide life cycle product support must be minimized while still achieving warfighter performance requirements.

The DoD workforce responsible for achieving these product support outcomes must also:

- Identify and refine support requirements
- Advocate for the best design alternative
- Influence system design for reliability, availability, maintainability, and supportability
- Plan for, acquire, and field the system and its support infrastructure
- Conduct requisite business case analyses of product support strategy alternatives
- Develop, document, refine, implement, and regularly update the system's product support strategy in a life cycle sustainment plan
- Foster test and evaluation of the support system.

Life cycle management dictates that those activities do not end once a system is fielded, and in many respects, they are only just beginning. In addition to continuing to evaluate and refine the product support strategy, key post-fielding product support imperatives are:

- Maintain readiness
- Improve sustainability
- Support the user
- Adapt to support evolving requirements, mission employment, operating environments, and ops tempo
- Provide sustaining engineering support

- Improve the system and its support system
- Modify and upgrade system capabilities
- Minimize life cycle costs
- Proactively mitigate obsolescence and diminishing manufacturing sources and material shortages
- Plan for eventual system retirement, reclamation, and disposal.

The DoD Product Support Assessment

To assist in more effectively and efficiently achieving these life cycle management outcomes, in November 2009 Carter issued a report titled *DoD Weapon System Acquisition Reform Product Support Assessment* at <https://acc.dau.mil/psa>. This comprehensive assessment identified a series of wide-ranging "findings and recommendations needed to drive the next generation of product support strategies," including "eight principal areas that, if developed or improved, will make product support more effective and acquisition reform more far-reaching." One of the areas, not surprisingly, was human capital.

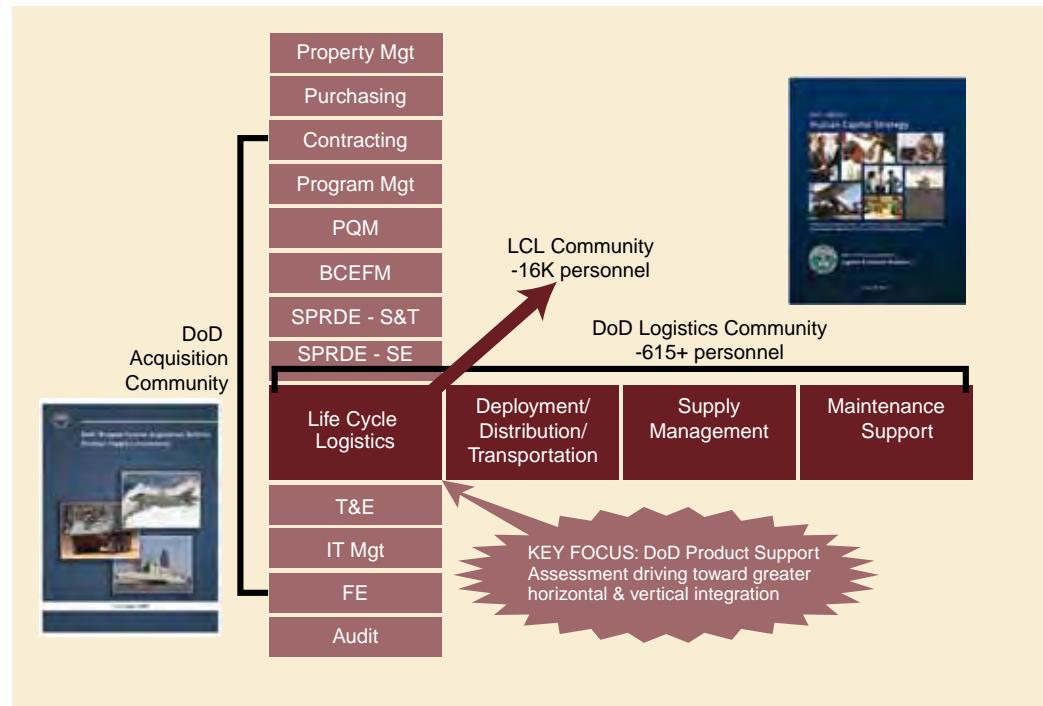
The report went on to say that "product support human capital derives primarily from two sources: the defense logistics workforce and the defense acquisition workforce," acknowledging in the process that DoD life cycle logistics "is most associated with product support competencies" and that the "life cycle logistics workforce stands at the nexus" of those two DoD workforces. While neither workforce demonstrates widespread product support competency across all career fields in the respective domains, the ability to achieve improved product support outcomes consistent with the recommendations of this report depends on a broader constituency capable of delivering efficient, cost-effective product support outcomes. The encouraging news is that the logistics and defense acquisition workforces are the beneficiaries of comprehensive and, in many cases, exemplary human capital strategic planning and workforce competency development initiatives over the past several years.

Key product support workforce human capital and professional development focus areas include life cycle product support and sustainment planning and management; life cycle cost management; performance-based life cycle product support strategy development, refinement, and implementation; supportability analysis; reliability, availability, and maintainability analysis; business case analysis, configuration management; and technical data management/product data management. While no substantial overlap is apparent between these key workforce product-support focus areas and those of the life cycle logistics workforce, weapon system product support is far broader than life cycle logistics, and indeed touches systems and sustaining engineering, business and financial management, cost estimating, program management, contracting, maintenance, supply chain management, distribution, and transportation workforce members as well. In fact, providing our warfighters with effective life cycle management and product support will ultimately touch virtually every aspect of

both DoD and commercial acquisition and logistics workforces in some way, shape, or form.

With this in mind, the Human Capital Integrated Project Team (IPT) was established in November 2009 to implement the challenging human capital recommendation articulated in the DoD Product Support Assessment report to "integrate product support competencies across the logistics and acquisition workforce domains to institutionalize successful traits of an outcome-based culture." The IPT's mission was to translate the report recommendations and, in conjunction with the Product Support Business Model and Governance Implementation IPTs, develop and implement an integrated approach to professionally develop a DoD and industry workforce capable of delivering successful outcome-based life cycle product support. To achieve this, the Joint Service team—consisting of product subject matter experts from the Components, Office of the Secretary of Defense, the Defense Acquisition University, industry, academia, the Defense Logistics Agency, and U.S. Transportation Command—has identified a series of 28 specific projects and initiatives in response to the following six overarching human capital "key tasks" outlined in the report:

- Identify new or modified product support competencies and proficiencies driven by proposed Department of Defense Product Support Assessment strategy, policy, and process changes.
- Incorporate new or modified product support competencies into DoD and industry logistics and acquisition workforce career field training, recruitment, and retention strategies.
- Identify potential assimilation requirements for supply management, maintenance support, and distribution/transportation workforce members into the acquisition life cycle logistics career field.
- Capitalize on Section 852 Defense Acquisition Workforce Development Fund authorities to grow and develop the future product support workforce.
- Expand integrated life cycle management training at DoD universities, public universities and institutions, and corporate universities.
- Update key DoD guidebooks and handbooks to facilitate defense logistics and acquisition workforce professional development and workplace application.



Competency Identification

Many of the individual projects and initiatives are intentionally being addressed in parallel rather than sequentially, although given its foundational nature, the first recommendation was the highest priority and is nearing completion of the four initiatives identified to implement the product support competencies and proficiencies human capital recommendation. Specific projects and initiatives identified to successfully address this key task include:

- Identify new or modified product support competencies driven by the Product Support Assessment. Review proficiencies contained in the June 2008 DoD Logistics Human Capital Strategy, *DoD Core Logistics Competencies and Proficiencies Booklet*, and the November 2009 Product Support Assessment report to identify any product support gaps, required additions, and/or elevation of proficiencies required to competency level.
- Finalize a list of integrated, multi-disciplinary executive-level product support and life cycle management competencies for designated defense acquisition workforce key leadership positions for use, among others, in crafting future defense acquisition workforce executive-level acquisition qualification standards and potential 400-level training for both the broader acquisition workforce, and also targeted at senior life cycle logisticians/product support managers.
- Conduct both a top-level and a detailed gap analysis to the terminal learning objective level between existing DAU learning assets and the June 2008 DoD Logistics Human Capital Strategy competency set for the four logistics workforce categories: life cycle logistics, identify new courseware/learning asset requirements, Defense Acquisition Workforce Improvement Act certification requirements, and core-plus training requirements.

Learning Assets and Guidebooks

Ultimately, the competency review and subsequent gap analyses are intended to identify strategic, functional, policy, process, and related training/learning asset changes in the future as a result of these Product Support Assessment recommendations. This will require new competency sets to be incorporated into the training curriculum and other workforce management activities.

Implicit in these competency identification efforts are tasks under other recommendations to translate these product support competencies into human capital professional development, training, and tools/resources to ultimately support a more proficient workforce. As a result, the team has identified and is working with the Life Cycle Logistics Functional IPT to develop and deploy a series of new and updated Defense Acquisition University learning assets to address these and related product support competencies, including deployment of new product support manager rapid deployment training and development of new LOG 340 Life Cycle Product Support and LOG 211 Supportability Analysis courses later in 2011, among many others.

In addition to the collaborative development of those and other courses, the team is also aggressively moving forward with developing up to 25 proposed continuous learning modules over the next several years on a diverse series of product support topics.

Working with the two other Product Support Assessment implementation IPTs, the Human Capital IPT is also assisting with the development, fielding, Web hosting, and incorporation into workforce training of a series of new or revised and updated guidebooks, including the *Defense Acquisition Guidebook* (updates); the *Product Support Manager's Guidebook*; the *Business Case Analysis Guidebook*; the *Logistics Assessment Guidebook*; and the *Integrated Product Support (IPS) Element Guidebook*.

Tools, References and Other Human Capital Development Initiatives

In addition to the aggressive training and guidebook development efforts, a number of other Human Capital IPT professional development initiatives are currently under way, including:

- Assisting the Defense Logistics Agency to smoothly and efficiently execute planned assimilation of nearly 3,000 personnel into the defense acquisition workforce life cycle logistics career field between now and fiscal year 2016
- Establishing a comprehensive Product Support Manager reference repository site on the DAU Logistics Community of Practice at <https://acc.dau.mil/psm>.
- Developing a new Product Support Manager's Toolkit to replace the existing Performance Based Logistics Toolkit at <https://acc.dau.mil/pbltoolkit>.
- Working with public and private sector academic institutions in addition to the Defense Acquisition University to address product support and life cycle management

Design for and develop an effective and efficient product support strategy that optimizes system readiness and availability, while minimizing logistics footprint and life cycle costs.



competencies and processes into workforce professional development and training. Among the many initiatives envisioned under this effort, the first involves initial planning in collaboration with the Center for Joint and Strategic Logistics at www.ndu.edu/CJSL/DOCS/CJSL-Purple-Book-Summary-091028.pdf for development of an executive-level life cycle systems management elective at the National Defense University.

- Development of a quick reference, Web-based, hyper-linked Life Cycle Logistics wall chart capturing key activities and deliverables throughout a system's life cycle. In 2009, in collaboration with DAU, U.S. Army Materiel Command Logistics Support Activity deployed a Web-based version of their highly regarded Life Cycle Logistics Wall Chart at <https://acc.dau.mil/losa/>. The Product Support Assessment Human Capital IPT has undertaken an initiative to expand this Service-specific resource into a Web-based, Joint Service, DoD Life Cycle Product Support Wall Chart based on the Army chart.

Where to From Here?

Effective and efficient product support planning and implementation is foundational to optimizing weapon system life cycle cost and performance outcomes. So too, is the need for a DoD and industry acquisition and logistics workforce that not only possesses, but is able to leverage the requisite product support competencies, tools, training, guidebooks, references, processes, and expertise to successfully achieve these two vitally important outcomes. Human capital is a fundamental and essential ingredient to delivering efficient and effective product support in support of our nation's defense; and the DoD Product Support Assessment Human Capital IPT is committed to ensuring the defense acquisition and logistics workforce has the requisite product support skills, training, and tools to achieving them.

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